

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

ROSETTE, INC., a New Mexico corporation; BURGETT INVESTMENT, INC., a New Mexico corporation; and BURGETT GEOTHERMAL GREENHOUSE, INC., a New Mexico corporation,

Plaintiffs and
Counter-Defendants,

v.

No. CIV 93-1379 BB

UNITED STATES OF AMERICA; JANET RENO, as Attorney General; DEPARTMENT OF INTERIOR; BRUCE BABBITT, Secretary of Interior of the United States; JAMES BACA, in his official capacity as Director of the Bureau of Land Management; WILLIAM CALKINS, in his official capacity as State Director of Bureau of Land Management; and LINDA RUNDELL, in her official capacity as Las Cruces District Manager of Bureau of Land Management;

Defendants and
Counter-Claimants.

**COURT'S FINDINGS OF FACT
AND CONCLUSIONS OF LAW**

THIS MATTER came on for a trial to the Court without a jury at Las Cruces on November 16 and 17, 1998, and all evidence having been presented, and the parties having

submitted their respective proposed findings of fact and conclusions of law, the Court now makes the following findings of fact and conclusions of law:

Findings of Fact

1. Stipulated facts were filed by the parties on March 10, 1995 (“Stip.”).
2. A previous decision of this Court dismissed Plaintiffs’ complaint on April 10, 1996. The Tenth Circuit Court of Appeals affirmed this Court’s dismissal of Plaintiffs’ complaint on April 7, 1998. *Rosette, Inc. v. United States*, 141 F.3d 1394, 1397-98 (10th Cir. 1998).
3. Plaintiffs are all related corporations controlled by Dale Burgett or members of his immediate family. Plaintiffs’ greenhouse operation was located in Animas because of the existence of geothermal hot water in that area.
4. Patents were issued by the United States in the 1930s for the surface estate to certain real property now owned by Plaintiff Rosette, Inc., in Section 7, Township 25 South, Range 19 West, N.M.P.M., located in Hidalgo County, New Mexico (“Section 7”), pursuant to the Stock Raising Homestead Act of December 26, 1916.
5. Those patents expressly reserved to the United States “all the coal and other minerals in the land so entered and patented, together with the right to prospect for, mine, and remove same pursuant to provisions and limitations of the Act of December 26, 1916.” Stip. ¶ 1.

6. Plaintiff Burgett Investments is in the business of growing roses in greenhouses for commercial distribution. Plaintiff utilizes water and geothermal heat from wells located on Plaintiff's property in its business.
7. In 1978, the Bureau of Land Management ("BLM") offered lands, including Section 7, for lease of geothermal resources on which Amax Exploration, Inc. ("Amax") was the successful bidder.
8. The BLM lease was issued to Amax in 1979 and Burgett Investments was formally designated as an operator under the lease. The BLM lease has been subsequently assigned, but Burgett Investments has remained the primary operator.
9. Under Section 3(c) of the lease, Burgett Investments is required to pay to the United States a royalty of 10% of the value of geothermal production from the lease.
10. The Minerals Management Service ("MMS") adopted new regulations for determining the value of geothermal resources in 1992. *See* 30 C.F.R. § 206.355.
11. These regulations recognize three alternative valuation methods for geothermal resources: (1) gross proceeds for resources sold under an arms-length contract, (2) the equivalent value of the least expensive, reasonable alternative energy source, or (3) a value determined by any other reasonable valuation. 30 C.F.R. § 206.355b(i)(ii) and (iii).
12. It is undisputed Burgett does not buy the geothermal resources at issue under an arms-length contract and the third alternative only applies if there is no reasonable alternative fuel and has never been used by MMS. The dispute, therefore, is what is

the least expensive, reasonable alternative energy source and what is its “equivalent value.”

13. Until 1992, MMS calculated Burgett’s royalties based on the price of coal at mine mouth giving Burgett a credit because geothermal was approximately 50% more efficient than coal. Under the 1992 revision, MMS now proposes to use the cost of natural gas delivered to Plaintiff’s isolated rural location.
14. Under the least expensive, available alternative fuel methodology, MMS charges royalties on the amount of energy displaced rather than energy used.
15. When the delivered price of natural gas is considered as the least expensive, available alternative fuel, the MMS formula for royalty calculation involves an estimate of alleged boiler and stack losses of heat. MMS’s estimated royalty calculations for delivered price natural gas thus results in Rosette paying royalties on 25% more energy than it actually uses.
16. Government witnesses testified natural gas would have to be transported from the Farmington area into Texas, then “back-hauled” to Animas. Plaintiff testified he could tap into El Paso Natural Gas’s mainline to California.
17. Changing the alternative fuel from coal to natural gas resulted in Plaintiff’s 1991 royalty of approximately \$7,700.00 increasing to over \$27,000.00 in 1992.
18. Both the use of the coal price at the mine mouth and the hypothetical cost of natural gas delivered to such a rural and remote location are very poor surrogates for determining the actual value of geothermal steam in Animas, New Mexico.

Imposition of the delivery cost of natural gas to this location also totally ignores the testimony that Burgett went broke using similar hydrocarbon fuel to operate a greenhouse near Cloudcroft and relocated to Animas solely to take advantage of the geothermal source.

19. Unlike gas and coal, geothermal energy is not readily transportable and must be used in close proximity to its source. Coal and natural gas are therefore more usable and thus more valuable fuels.
20. There is an existing, albeit much smaller, greenhouse using federal geothermal heat in Doña Ana County and royalty is calculated from the arm's-length sale.
21. When MMS threatened to shut in his federal wells in 1993, Burgett did not construct a gas pipeline or a coal fired generation plant but bought up the adjoining state geothermal leases. Plaintiff pays the State of New Mexico a royalty on the geothermal resource he mines from adjoining leases and uses in these same greenhouses. The Court recognizes this is a "thin" market and therefore difficult to fairly evaluate. However, it produces a much closer approximation of a realistic resource value than a hypothetical value of coal or natural gas for the Rosette location where neither is a realistic option.
22. The "least expensive, reasonable alternative energy source" is not coal at the mine mouth or natural gas back-transported to Animas, but geothermal steam in southern New Mexico.

23. The geothermal lease requires Plaintiffs to “gauge or otherwise measure all production, sales, or utilization of geothermal resource and shall record the same accurately in records as required by the [BLM].” AR, p. 50. The metering of geothermal resources is also governed by Department of the Interior Geothermal Resources Operation Order No. 7, which provides that “[a]ll meters and metering systems shall be maintained in acceptable working condition and shall be inspected, tested, and adjusted to meet appropriate design standards.”
24. By decision on June 9, 1993, BLM required Plaintiffs to install a new metering system meeting certain detailed specifications. One of these specifications requires that “[a]ll broken, damaged, or malfunctioning equipment shall be replaced or repaired by the operator in a manner that will not affect the accuracy or operation of the equipment.” AR 632, ¶ 3(e). A new metering system was installed by Plaintiffs and accepted by BLM on February 1, 1994.
25. The Johnson-Yokogawa (“J-Y”) metering system approved by BLM, including vortex flow meters, have been used for thirty years, are not experimental, meet ANSI standards, and are widely used in other industrial settings.
26. The vortex metering system is appropriate for use at Plaintiff’s facilities, but it was not originally designed to account for the fact that Plaintiff’s operation is located in an area of frequent lightning strikes. Failure to adequately consider this problem resulted in damage of \$8,457.12. Nonetheless, the operating agreement makes Plaintiff solely responsible for this cost.

27. Since Plaintiff refused to install a meter acceptable to MMS or properly account for royalties, Richard Estabrook constructed an elaborate model to estimate the royalty value of the geothermal resources used between 1987-93.
28. Estabrook's heat conductivity values for greenhouses represent worst case scenarios such as cold clear nights, and do not represent actual conditions for heat conductivity values for Rosette's greenhouses.
29. Estabrook's model, therefore, overestimates Rosette's energy use by a factor of 10-50%.
30. Ted Short's estimated BTU consumption by Rosette, being 50% of that estimated by Estabrook, is based upon actual data for commercial greenhouses located in Columbus, Ohio, converted through the use of the degree day analysis, which is a standard technique used in the heat engineering industry to project BTU consumption at different geographical locations.

Conclusions of Law

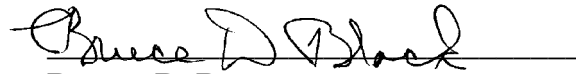
1. There is no issue as to jurisdiction.
2. In 1970, Congress enacted the Geothermal Steam Act, Pub. L. 91-581, now codified at 30 U.S.C. § 1001 *et seq.*, granting the Secretary of the Interior the authority to lease geothermal resources owned or reserved by the United States.
3. Plaintiffs are bound by the terms of the BLM lease under the operating agreement signed by Plaintiffs. *Rosette, Inc. v. United States*, 141 F.3d at 1397-98.

4. BLM requires Plaintiffs to “gauge or otherwise measure all production, sales or utilization of geothermal resource and shall record the same accurately in records as required by the [BLM].” AR 50. The J-Y metering system required by Defendants here is consistent with “standard practices, procedures, and specifications in industry.” 43 C.F.R. § 3263.1.
5. The metering of geothermal resources is also governed by Department of the Interior Geothermal Resources Operation Order No. 7, which provides that “[a]ll meters and metering systems shall be maintained in acceptable working condition” Mem. Op., p. 7-8.
6. Plaintiffs are required to maintain the metering system and are hereby ordered to maintain the J-Y system of the future.
7. MMS’s determination to interpret the 1992 regulations to calculate royalties on the hypothetical value of natural gas delivered to Animas and additionally charge for 25% more heat than is actually consumed by Rosette is arbitrary and capricious.
8. The least expensive, reasonably available alternative fuel is hot water produced from similar geothermal wells in southern New Mexico including those state wells currently being used by Rosette.
9. Application of the Estabrook model results in an overestimation of royalties.
10. This matter will be remanded to MMS for determination of the appropriate amount of royalties owing to Defendants based on BTU consumption calculated by the

accepted degree day method, and based on the appropriate least expensive, reasonable alternative fuel which is geothermal hot water produced in southern New Mexico.

A Judgment consistent with these findings of fact and conclusions of law should be drawn up by counsel and presented to the Court.

DATED at Albuquerque this 18th day of December, 1998.


BRUCE D. BLACK
United States District Judge

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